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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,240	07/23/2003	Yoshihiro Sasaki	50750/DBP/A400	9990

23363 7590 02/14/2005

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EXAMINER	
MULLEN, THOMAS J	
ART UNIT	**PAPER NUMBER**
2632	

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,240	SASAKI, YOSHIHIRO	
	Examiner	Art Unit	
	Thomas J. Mullen, Jr.	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

TM 2-8-05

4)☒ Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13 and 14* is/are allowed.

6)☒ Claim(s) 1-10 *1-12 and 15-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 July 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/23/03, 10/6/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. The "parent" application PCT/JP02/12330 is also noted; any publication number associated with this application should be inserted in paragraph 0001 of the specification, when known.

2. The drawings are objected to because Fig. 1 should be labeled "Prior Art".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The disclosure is objected to because of the following informalities:

paragraph 0022, line 2, it appears that "construction" should be --constructed--.

Appropriate correction is required.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 10, 16, 19 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Gillis et al (US 6631096, eff. date 2/2/01).

Note in Figs. 1-2 in Gillis et al, vehicle interior 20; continuous wave transmitter 16; continuous wave receiver 18; and electronic control unit (ECU) 26 including envelope detector 56 (see Fig. 3) and controller 28. Gillis et al teaches that the continuous wave signal (e.g. "ultrasound", col. 3, lines 4-5) which is generated by transmitter 16 and received by receiver 18 is "reflected (off) surfaces within the vehicle's interior and/or a moving object (i.e., an intruder)" (Abstract). As to the nature of the signals received by receiver 18, Gillis et al specifically discloses examples of a "non-intrusion envelope" 92 (Fig. 4) and an "intrusion envelope" 96 (Fig. 5), see col. 2, lines 58-59 and col. 5, line 58 to col. 6, line 14; i.e., the "non-intrusion envelope" is a harmonic signal with "a rapid rise time", while the "intrusion envelope" is a harmonic signal with "a slow rise time". The process of distinguishing between such envelopes is set forth in Figs. 6-8, resulting in a determination of a "non-intrusive event" (step 220) or of an "intrusion event" (step 258). Based on Figs. 4-5 and the associated discussion thereof in the Gillis et al specification, it is clearly an inherent teaching of Gillis et al "not to recognize...an intrusion" if the signal "reaches a second level higher than a first level" (where in Fig. 4, the peaks are a "second level" and the valleys are a "first level"), "within a predetermined time after reaching the first level" (i.e., as a result of the "rapid rise time"). Thus, Gillis et al discloses a "vehicle-mounted intrusion detection apparatus" and a "vehicle equipped with" such an apparatus, as recited in claims 10 and 16. Further, as shown in Fig. 2 the components of the apparatus (which carry out functions of a corresponding method) include a transmitter 16, receiver 18, "mixer" 48, and "computer" 28, as recited in claims 19 and 22.

6. Claims 11-12, 17-18, 20-21 and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kani et al (US 5856778).

Kani et al '778 is related to Japanese publication 09274080 cited by applicant, and discloses a "vehicle-mounted intrusion detection apparatus" and a "vehicle equipped with" such an apparatus, note ultrasonic transmitting/receiving sensor S mounted within a vehicle (Figs. 2A-2B), the sensor S including (Fig. 1) ultrasonic transmitter 10a; ultrasonic receiver 10b; "doppler detecting portion" 60,70 (col. 4, lines 34-36); envelope detector 80; and micro-computer 90.

Associated with receiver 10b is a comparing circuit 50, which outputs a "high level compared signal" (when the received signal is above a predetermined level), that is converted into a "doppler shift signal" by doppler detecting portion 60,70 (col. 4, line 60 to col. 5, line 6). As discussed with respect to Fig. 5, a period "T" of the doppler shift signal output by element 70 is compared with a predetermined time period "ΔT_o", which Kani et al '778 teaches is "a relative intruding speed of a person into the passenger compartment of the vehicle" (col. 5, lines 13-21). It is further determined whether the period "T" is within the predetermined time period "ΔT_o" continuously for a predetermined time "N", which Kani et al '778 teaches is "a time...necessary for a person to intrude into the passenger compartment of the vehicle" (col. 5, lines 22-32), before an "output alarm" or "inhibit alarm" (151,152) decision is made. Thus, Kani et al '778 discloses a "vehicle-mounted intrusion detection apparatus" and a "vehicle equipped with" such an apparatus, as recited in claims 11 and 17. Further, as shown in Fig. 1 the components of the apparatus (which carry out functions of a corresponding method) include a transmitter 10a, receiver 10b, "mixer" (60,70), and "computer" 90, as recited in claims 20 and 23.

Kani et al '778 additionally teaches, as discussed with respect to Figs. 10-11, determining whether a frequency "F" of the doppler shift signal is within a predetermined frequency range "ΔF_o", which Kani et al '778 teaches is "a frequency range corresponding to the relative speed of a person who is intruding into the passenger compartment of the vehicle" (col. 7, lines 57-65). It is further determined whether the frequency "F" is within the predetermined frequency range "ΔF_o" continuously for the predetermined time "N" mentioned above (col. 7, line 66 to col. 8, line 7), before an "alarm" or "inhibit alarm" decision (118,116) is made. Thus, Kani et al '778 discloses a "vehicle-mounted intrusion detection apparatus" and a "vehicle equipped with" such an apparatus, as recited in claims 12 and 18. Further, as shown in Fig. 1 the components of the apparatus (which carry out functions of a corresponding method) include a transmitter 10a, receiver 10b, "mixer" (60,70), and "computer" 90, as recited in claims 21 and 24.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kani et al.

Although Kani et al '778 (discussed in paragraph 6 above) doesn't explicitly teach combining the time-based and frequency-based analyses of received signals as discussed above, it would have been obvious to those skilled in the art to combine these fundamentally different types of analyses in determining whether to "recognize" the signals as indicating intrusion, either to provide a higher standard for false-alarm determination (by requiring an "inhibit alarm" decision under both analyses before the alarm is inhibited), or to provide redundancy for false-alarm determination (by using an "inhibit alarm" decision under either analysis to inhibit the alarm).

9. Claims 13-14 are allowed.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The art cited by applicant (in addition to Japanese publication 09274080) has been considered. Kani et al (US 6198385), Howell et al (US 4665379), Perski (US 6462657), Dauphin (US 6057760) and Bonhoure (US 6157293) are cited to further show the state of the art.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mullen, Jr. whose telephone number is 571-272-2965. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu, can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

TJM

Thomas J. Mullen, Jr.
Primary Examiner
Art Unit 2632